AMENDMENT TO THE CLAIMS

1. (Currently amended) A mouse comprising:

(a) a first transgene comprising (i) a regulatory gene encoding a regulatory protein, and (ii) a transcription terminator at which site transcription terminates, said transcription terminator situated 3' to said regulatory gene, wherein said first transgene has integrated into an endogenous gene of said mouse such that said endogenous gene is mutated and said regulatory gene is positioned for expression under control of the promoter of said endogenous gene~~, said promoter being operably linked to said regulatory gene upon integration of said transgene into said endogenous gene, and said first transgene mutagenizes said endogenous gene~~; and

(b) a second transgene comprising a gene operably linked to a regulatory sequence regulated by said regulatory protein, wherein said second transgene is integrated into the genome of said mouse such that expression of said gene operably linked to said regulatory sequence is capable of being regulated by said regulatory protein,

wherein said regulatory protein is expressed at a level sufficient to modulate ~~modulates~~ expression of said gene operably linked to said regulatory sequence in said mouse.

2. (Previously presented) The mouse of claim 1, wherein said first transgene further comprises a splice acceptor.

3-5. (Canceled)

6. (Previously presented) The mouse of claim 1, wherein said regulatory protein is a tetracycline repressor fused to an activator protein.

7. (Original) The mouse of claim 6, wherein said activator protein is VP16.

8. (Previously presented) The mouse of claim 1, wherein said first transgene further comprises a nucleic acid sequence encoding a constitutively expressed marker gene, said marker gene encoding a marker protein that is detectable in a mammalian cell.

9. (Original) The mouse of claim 8, wherein said marker protein is a green fluorescent protein.

10. (Original) The mouse of claim 9, wherein said green fluorescent protein has increased cellular fluorescence relative to the wild-type green fluorescent protein.

11. (Original) The mouse of claim 9, wherein the green fluorescent protein is fused to a mammalian selectable marker protein.

12. (Original) The mouse of claim 11, wherein said mammalian selectable marker is neomycin phosphotransferase.

13. (Previously presented) The mouse of claim 1, wherein said first transgene further comprises a recognition sequence recognized by a yeast VDE DNA endonuclease.

14-17. (Canceled)

18. (Previously presented) The mouse of claim 1, wherein said first transgene further comprises an internal ribosomal entry site operably linked to said regulatory gene.

19. (Cancelled)

20. (Previously presented) The mouse of claim 1, wherein said regulatory gene encodes a regulatory protein comprising a tetracycline repressor fused to a VP16 transcriptional activator, and said regulatory sequence of said second transgene is regulated by said tetracycline repressor fused to a VP16 transcriptional activator, wherein expression of said gene operably linked to said regulatory sequence is modulated in said mouse in the presence of tetracycline or a derivative thereof.

21. (Previously presented) The mouse of claim 1, wherein said gene operably linked to said regulatory sequence encodes a reporter protein.

22. (Previously presented) The mouse of claim 1, wherein said gene operably linked to said regulatory sequence encodes a cell ablation factor.

23. (Previously presented) The mouse of claim 1, wherein said gene operably linked to said regulatory sequence encodes an oncogene.

24. (Previously presented) The mouse of claim 1, wherein said gene operably linked to said regulatory sequence encodes the endogenous gene that is mutated by said first transgene.